

ABSTRACT

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Title: Intensive Care Medicine III - Pharmacological treatment of ARDS
Form: Diploma Thesis
Name of University: Charles University in Prague, Faculty of Pharmacy in Hradec Králové
Degree: Pharmacy

Aim and Task: The aim of diploma thesis is to gather the data and analyse the current information dealing with possible ways of pharmacological therapy of those who suffer from ARDS. The thesis also deals with formulation of recommendations for ARDS treatment.

Principal information: Nowadays there are restricted possibilities of therapy for those who suffer from ARDS. It is essential to use protective ventilation strategy in therapeutic program of the patients as well as conservative fluid management and appropriate nutritional supplementation therapy. Specific pharmacotherapy is not available yet. We make an attempt to gather all the available treatises which are dealing with various types of pharmacotherapy, for example: the use of surfactant, neuromuscular blocking agents, tetracycline-related compounds, N-acetylcysteine, nitrogen oxide, mesenchymal stem cells, gene therapy, prostaglandins, glucocorticoids, inhibitors of HMG-CoA reductase, spironolactone etc. Although the spectrum of the research is extremely extensive, there is no type of pharmacotherapy which could be recommended for the treatment as the best one. Today is used nitrogen oxide, diuretics, glucocorticoids, inhibitors of HMG-CoA reductase and neuromuscular blocking agents.

Conclusion: Existing therapy is not sufficient and it is essential to try to find new methods of treatment. Some of the tested types of therapy seem to have a great potential to be successful (mesenchymal stem cells and gene therapy). Considering the various causes of the syndrome and heterogeneity of the population it is probable that it will be nearly impossible to find just one type of therapy which will be suitable for all patients with ARDS.

Keywords: ARDS, therapy, pharmacotherapy, gene therapy, ventilation, anatomy, pathophysiology.